



sequences include, but is not limited to, the size of the primers, the size of the anticipated amplified product, the melting temperature of the primers, the G/C content of the primers, restriction sites or any other functional entities encoded in the primers, the genomic localization of the predicted amplified sequences, the cost of primer synthesis, and suitable reaction conditions for various reactions (*e.g.*, PCR) including the primers. The following is an example of a primer file:

675342.f1 TGCATCTGGGAGGGTGTC (SEQ ID NO:1)
675342.r1 AACCAATCCCAAGGATCCAG (SEQ ID NO:2)
TmL = 60.65; TmR = 61.08; product size = 1002

673920.f1 GACCTCACTGCTCCTGAACC (SEQ ID NO:3)
673920.r1 TCTGCAACCTTGCTTCTG (SEQ ID NO:4)
TmL = 59.84; TmR = 59.19; product size = 998

759724.f1 CAACATTTGGTTGCAGTCATC (SEQ ID NO:5)
759724.r1 TGTGTCTTTCTTCCCTCAAAG (SEQ ID NO:6)
TmL = 59.04; TmR = 59.79; product size = 996

652197.f1 GGAGCATGCAAAAGAGGATG (SEQ ID NO:7)
652197.r1 CAGATCCCACTGCCATTAGC (SEQ ID NO:8)
TmL = 60.74; TmR = 60.62; product size = 1185

746914.f1 GGAGTAAAGGAGGCTGACTGG (SEQ ID NO:9)
746914.r1 CACCACAGCAGTAAGCTGAAAG (SEQ ID NO:10)
TmL = 60.25; TmR = 60.11; product size = 1333

770028.f1 TTTTCAGAGGCTTCCCATAAGTC (SEQ ID NO:11)
770028.r1 TGCTTTCCATTCCCTGCTTC (SEQ ID NO:12)
TmL = 59.73; TmR = 60.33; product size = 1277

748329.1.f1 AAAGCATAGGAAACATCCAAATG (SEQ ID NO:13)
748329.1.r1 TCGATCAAGCTTCAAAGGAC (SEQ ID NO:14)
TmL = 59.41; TmR = 59.44; product size = 829

748329.2.f1 AACCCGGGAGGGTTGTCAG (SEQ ID NO:15)
748329.2.r1 TTTGCATGTTTGCATTGG (SEQ ID NO:16)
TmL = 60.92; TmR = 60.49; product size = 808

656003.1.f1 TTGAATTTTCATCGGTCAGG (SEQ ID NO:17)
656003.1.r1 CCCTGGATTTCAGCTGTTTC (SEQ ID NO:18)
TmL = 59.92; TmR = 59.67; product size = 967

656003.2.f1 ATCACCTTCATTCCCTCTGG (SEQ ID NO:19)
656003.2.r1 TGACCACATTCTGCCTTG (SEQ ID NO:20)
TmL = 58.94; TmR = 59.69; product size = 985

650954.f1 GAACGCAGCTTCCTTTTG (SEQ ID NO:21)
650954.r1 GGGAAAGACAACCTTGAAATG (SEQ ID NO:22)
TmL = 60.00; TmR = 59.98; product size = 211

654685.f1 GCAACTTCTCCGGGTTAGAG (SEQ ID NO:23)
654685.r1 CAGCTGTGTACTGTTGGCTTG (SEQ ID NO:24)
TmL = 60.25; TmR = 60.91; product size = 229

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663047.f1 AGGAAAGAGAGGTGTCTCAGC (SEQ ID NO:25)
663047.r1 AAAAGCCAGTGCTTCTGG (SEQ ID NO:26)
TmL = 60.01; TmR = 59.49; product size = 274

683270.f1 AACTGTGGGCCTTAGATG (SEQ ID NO:27)
683270.r1 CAGGGTTTCCCACAGAAAG (SEQ ID NO:28)
TmL = 59.05; TmR = 59.56; product size = 268

683663.f1 GGACAAGCTGGTTCTTC (SEQ ID NO:29)
683663.r1 AATATTACAGCGCTGTC (SEQ ID NO:30)
TmL = 58.77; TmR = 59.29; product size = 232

695950.f1 GTAAAGCCCCTGACATCCAG (SEQ ID NO:31)
695950.r1 AACTCCAACAGCCAAGC (SEQ ID NO:32)
TmL = 59.55; TmR = 60.25; product size = 261

711254.f1 AACGCTCCATTGCTGCTAC (SEQ ID NO:33)
711254.r1 GCCAGACTGGATCTACCTG (SEQ ID NO:34)
TmL = 60.42; TmR = 59.68; product size = 240

716931.f1 ATGTCTCTGGCATCTGGAG (SEQ ID NO:35)
716931.r1 TTGGAAAAACAAATTGTACCTCAC (SEQ ID NO:36)
TmL = 60.22; TmR = 59.35; product size = 300

723983.f1 AACCCCAATTGTTCAAGTG (SEQ ID NO:37)
723983.r1 ATTCCAAAATGCCTGACTGC (SEQ ID NO:38)
TmL = 60.12; TmR = 60.08; product size = 355

727725.f1 AGTCCAGCAGGGAGGAATC (SEQ ID NO:39)
727725.r1 GTGTCGATGGTTTACAAGAGG (SEQ ID NO:40)
TmL = 60.60; TmR = 59.92; product size = 274

732837.f1 CTGATTCAAGCTGGACTGG (SEQ ID NO:41)
732837.r1 AGCATTGGCTGTGACC (SEQ ID NO:42)
TmL = 60.00; TmR = 59.70; product size = 365

738261.f1 TGATGCTGACCAGGAAAAC (SEQ ID NO:43)
738261.r1 AGCTGATGAGGCAGAAAAGG (SEQ ID NO:44)
TmL = 58.70; TmR = 59.57; product size = 208

756209.f1 TCTAAAATGGGCACAAGG (SEQ ID NO:45)
756209.r1 CTTCCCTTGCCCCAACAG (SEQ ID NO:46)
TmL = 59.93; TmR = 59.67; product size = 337

768348.f1 TTTCTGGTTGCAGGATTGG (SEQ ID NO:47)
768348.r1 AACACATGCACACGCACAC (SEQ ID NO:48)
TmL = 61.00; TmR = 60.24; product size = 282

777535.f1 GAAAGGAAAAATATCCCAGAGG (SEQ ID NO:49)
777535.r1 AAATGCTGGCCTTATTTCAC (SEQ ID NO:50)
TmL = 58.15; TmR = 58.26; product size = 241

783903.f1 GCAGCTGAAAACCTAACCCAAG (SEQ ID NO:51)
783903.r1 AATGCAGAGAATGAAGACTGAATG (SEQ ID NO:52)
TmL = 60.29; TmR = 59.79; product size = 207

733241.1.f1 CCAGGACCTGCCTCTCAG (SEQ ID NO:53)
733241.1.r1 TGCCTGTCTGCTGTTCTG (SEQ ID NO:54)
TmL = 59.47; TmR = 60.18; product size = 1314

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733241.2.f1 TGGGAGTCACTCAAGTGCAG (SEQ ID NO:55)
733241.2.r1 AATTGATCCATTTCTTCTTGG (SEQ ID NO:56)
TmL = 60.02; TmR = 59.34; product size = 1262

733241.3.f1 GCCCTTCCTGTGGTTTAG (SEQ ID NO:57)
733241.3.r1 GGGAGAGAGAAAAGGACAACG (SEQ ID NO:58)
TmL = 59.99; TmR = 60.23; product size = 1306

660316.f1 CACTTCAAATCTGAAAAGTTCTGG (SEQ ID NO:59)
660316.r1 CAGACTGCATTGGCCTGAG (SEQ ID NO:60)
TmL = 60.52; TmR = 60.56; product size = 396

672598.f1 TCTGCAATTTTAACCATTATGAG (SEQ ID NO:61)
672598.r1 CTTTCCAGGGGAAATACAC (SEQ ID NO:62)
TmL = 58.73; TmR = 59.69; product size = 457

676658.f1 GCAAAGGGACACGTCTAGGT (SEQ ID NO:63)
676658.r1 CTGTTTCGACACAACACCAA (SEQ ID NO:64)
TmL = 59.21; TmR = 59.64; product size = 341

681855.f1 CCAGCTGTGCAGATTCTTC (SEQ ID NO:65)
681855.r1 ATTCAGCAGCCCAGGTTAC (SEQ ID NO:66)
TmL = 60.01; TmR = 59.96; product size = 441

687779.f1 TCCTGAAGATGCTGAGTCAATG (SEQ ID NO:67)
687779.r1 GGCTGCAGTAGGTTCAAAG (SEQ ID NO:68)
TmL = 60.40; TmR = 59.88; product size = 390

719646.f1 ACAAGGGTGCAGGTGAAAAC (SEQ ID NO:69)
719646.r1 AATAGCCAACACCACCTTCTTC (SEQ ID NO:70)
TmL = 60.01; TmR = 59.53; product size = 395

730564.f1 CCTCAGGGAAAGATCAGACTCC (SEQ ID NO:71)
730564.r1 TTTGTGAAACCTTTGCTGTGTG (SEQ ID NO:72)
TmL = 60.20; TmR = 60.23; product size = 414

745381.f1 TCGCAGATCAAGGCTTACAG (SEQ ID NO:73)
745381.r1 TGTGGTGAAAACCAATACTGC (SEQ ID NO:74)
TmL = 59.17; TmR = 59.90; product size = 428

750823.f1 GAACCAGGCCAGAGTTTG (SEQ ID NO:75)
750823.r1 ATGTGGGGCATGTGACTTC (SEQ ID NO:76)
TmL = 59.71; TmR = 59.33; product size = 386

753539.f1 TAAACCCAGGCTCAGCAATG (SEQ ID NO:77)
753539.r1 AAAATGCTGCCCTTCCTTTC (SEQ ID NO:78)
TmL = 61.16; TmR = 60.56; product size = 368

762267.f1 GGACGTTCATTTGGATTG (SEQ ID NO:79)
762267.r1 GGGTGCCGTTCCATTATTAG (SEQ ID NO:80)
TmL = 60.32; TmR = 60.55; product size = 369

767583.f1 CCACTCTGCCATAGCACTTC (SEQ ID NO:81)
767583.r1 AAAGCCCCATTATGAACTCG (SEQ ID NO:82)
TmL = 58.47; TmR = 59.04; product size = 414

775788.f1 TGCCCATATGCTATTGTATCTGTC (SEQ ID NO:83)
775788.r1 TCCTCTCATCCCAGTTCCTG (SEQ ID NO:84)
TmL = 60.25; TmR = 60.19; product size = 297

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692036.f1 GTGTGTGAATGGCAGGTTTG (SEQ ID NO:85)
692036.r1 GGGGGCAGTTACCAAAAGAC (SEQ ID NO:86)
TmL = 60.01; TmR = 60.72; product size = 476

707612.f1 GCATCTGGTTGCCTTACCTC (SEQ ID NO:87)
707612.r1 CGCATGTATCAGGAATGAAGC (SEQ ID NO:88)
TmL = 59.70; TmR = 60.62; product size = 480

709543.f1 CCCCAAATGGGATAAAGAGG (SEQ ID NO:89)
709543.r1 AGAGGGAAAAACGTGAAGGAG (SEQ ID NO:90)
TmL = 60.49; TmR = 59.74; product size = 494

714041.f1 CTCCACTGAATTTCCCATT (SEQ ID NO:91)
714041.r1 TCCAAGTGAATGAAAACTGG (SEQ ID NO:92)
TmL = 58.49; TmR = 59.11; product size = 578

764904.f1 GGAGCCTCTTCATTATAACAGC (SEQ ID NO:93)
764904.r1 GATTTAACAAAGGGCAAAAGAGC (SEQ ID NO:94)
TmL = 58.50; TmR = 59.29; product size = 650

773843.f1 TCAGCAGGTGAACAGCACAG (SEQ ID NO:95)
773843.r1 ATGGGTGATCAAACACAGC (SEQ ID NO:96)
TmL = 61.24; TmR = 60.79; product size = 550

781783.f1 AAGCAGGGGCACTGAATATG (SEQ ID NO:97)
781783.r1 CAGAGCTGGGTTGGTAAGC (SEQ ID NO:98)
TmL = 60.10; TmR = 59.88; product size = 558

703668.f1 AGTGAACCTCGCTGTGAAAG (SEQ ID NO:99)
703668.r1 AAGCTGTGATTCCGTTCCAC (SEQ ID NO:100)
TmL = 59.51; TmR = 60.12; product size = 756

744236.f1 CCTGCAGGAAGGGTGTATT (SEQ ID NO:101)
744236.r1 TCTCTGAACAGCAGTCATAGCAC (SEQ ID NO:102)
TmL = 59.55; TmR = 59.70; product size = 626

651312.f1 GCACCTCCAGAAGGGAGAG (SEQ ID NO:103)
651312.r1 TGTGGCAAATTCAAGACACAG (SEQ ID NO:104)
TmL = 59.93; TmR = 59.69; product size = 758

731993.f1 AGCCCCAAACCTTCAAGC (SEQ ID NO:105)
731993.r1 TCCACCTATTTCACACACG (SEQ ID NO:106)
TmL = 60.20; TmR = 59.90; product size = 768

752055.f1 TTCTTAAAGTTAACCCACAGG (SEQ ID NO:107)
752055.r1 CAAAACCATTAGGTGGAGAGC (SEQ ID NO:108)
TmL = 59.41; TmR = 58.71; product size = 757

653556.f1 TTTCTCCATGAACAAATAGGAATG (SEQ ID NO:109)
653556.r1 AACTGGGAACCGCATAATTG (SEQ ID NO:110)
TmL = 59.39; TmR = 59.82; product size = 771

702011.f1 CACTGAAGCCAAAATAAGTCC (SEQ ID NO:111)
702011.r1 CAGAGTGCCTACTGGTCTAGG (SEQ ID NO:112)
TmL = 57.94; TmR = 58.46; product size = 922

Total number of bases to be ordered - 2322
Total length of PCR products - 32786

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